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Contents

Foreword

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x the first digit:

1 presented to TSG for information;

2 presented to TSG for approval;

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y the second digit is incremented for all changes of substance, i.e. technical enhancements, corrections, updates, etc.

z the third digit is incremented when editorial only changes have been incorporated in the document.

Introduction

Configuration Management (CM), in general, provides the operator with the ability to assure correct and effective operation of the 3G network as it evolves. CM actions have the objective to control and monitor the actual configuration on the Network Elements (NEs) and Network Resources (NRs), and they may be initiated by the operator or by functions in the Operations Systems (OSs) or NEs.

CM actions may be requested as part of an implementation programme (e.g. additions and deletions), as part of an optimisation programme (e.g. modifications), and to maintain the overall Quality of Service (QOS). The CM actions are initiated either as single actions on single NEs of the 3G network, or as part of a complex procedure involving actions on many resources/objects in one or several NEs.

Due to the growing number of specifications to model new services and Resource Models for Configuration Management (CM), as well as the expected growth in size of each of them from 3GPP Release 4 onwards, a new structure of the specifications is already needed in Release 4. This structure is needed for several reasons, but mainly to enable more independent development and release for each part, as well as a simpler document identification and version handling. Another benefit would be that it becomes easier for bodies outside 3GPP, such as the ITU-T, to refer to telecom management specifications from 3GPP. The new structure of the specifications does not lose any information or functionality supported by the Release 1999. The restructuring also includes defining new IRPs for the Network Resource Models (Generic, Core Network and UTRAN NRM).

Finally, the Name convention for Managed Objects (in Release 1999: 32.106-8) has been moved to a separate number series used for specifications common between several management areas (e.g. CM, FM, PM).

The following table shows an overview of the mapping between the old Release 1999 and new Release 4 CM specification structure.

Table: Mapping between Release '99 and the new Rel-4 specifications

R99 Old no.	Old (R99) specification title	Rel-4 New no.	New (Rel-4) specification title
32.106-1	3G Configuration Management: Concept and Requirements	32.600	**3G Configuration Management: Concept and High-level Requirements**
32.106-1	<Notification IRP requirements from 32.106-1 and 32.106-2>	32.301-1	**Notification IRP**: Requirements
32.106-2	Notification IRP: IS	32.301-2	Notification IRP: Information Service
32.106-3	Notification IRP: CORBA SS	32.301-3	Notification IRP: CORBA SS
32.106-4	Notification IRP: CMIP SS	32.301-4	Notification IRP: CMIP SS
32.106-8	Name convention for Managed Objects	32.300	**Name Convention for Managed Objects**
32.106-1	<Basic CM IRP IS requirements from 32.106-1 and 32.106-5>	32.601-1	**Basic CM IRP**: Requirements
32.106-5	Basic CM IRP IM (Intro & IS part)	32.601-2	Basic CM IRP: Information Service
32.106-6	Basic CM IRP CORBA SS (IS related part)	32.601-3	Basic CM IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (IS related part)	32.601-4	Basic CM IRP: CMIP SS
32.106-1	<Basic CM IRP Generic NRM requirements from 32.106-1 and 32.106-5>	32.620-1	**Generic Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (Generic NRM part)	32.620-2	Generic Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (Generic NRM related part)	32.620-3	Generic Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (Generic NRM related part)	32.620-4	Generic Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP CN NRM requirements from 32.106-1 and 32.106-5>	32.621-1	**Core Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (CN NRM part)	32.621-2	Core Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (CN NRM related part)	32.621-3	Core Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (CN NRM related part)	32.621-4	Core Network Resources IRP: CMIP SS
32.106-1	<Basic CM IRP UTRAN NRM requirements from 32.106-1 and 32.106-5>	32.622-1	**UTRAN Network Resources IRP**: Requirements
32.106-5	Basic CM IRP IM (UTRAN NRM part)	32.622-2	UTRAN Network Resources IRP: NRM
32.106-6	Basic CM IRP CORBA SS (UTRAN NRM related part)	32.622-3	UTRAN Network Resources IRP: CORBA SS
32.106-7	Basic CM IRP CMIP SS (UTRAN NRM related part)	32.622-4	UTRAN Network Resources IRP: CMIP SS

The present document is 3GPP TS 32.601-1: Basic Configuration Management IRP: Requirements.

1 Scope

The present document defines , in addition to the requirements defined in [1], [2] and [3], the requirements for the present IRP: Basic Configuration Management IRP.

2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non-specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TS 32.101: "3G Telecom Management principles and high level requirements".

[2] 3GPP TS 32.102: "3G Telecom Management architecture".

[3] 3GPP TS 32.600: "3G Configuration Management: Concept and High-level Requirements".

[4] 3GPP TS 32.620-2: "Generic Network Resources IRP: NRM".

[5] 3GPP TS 32.621-2: "Core Network Resources IRP: NRM".

[6] 3GPP TS 32.622-2: "UTRAN Network Resources IRP: NRM".

[7] 3GPP TS 32.623-2: "GERAN Network Resources IRP: NRM".

3 Definitions and abbreviations

3.1 Definitions

For the purposes of the present document, the following terms and definitions apply.

Data: is any information or set of information required to give software or equipment or combinations thereof a specific state of functionality.

Element Manager (EM): provides a package of end-user functions for management of a set of closely related types of Network Elements (NEs). These functions can be divided into two main categories:

- *Element Management Functions* for management of NEs on an individual basis. These are basically the same functions as supported by the corresponding local terminals.

- *Sub-Network Management Functions* that are related to a network model for a set of NEs constituting a clearly defined sub-network, which may include relations between the NEs. This model enables additional functions on the sub-network level (typically in the areas of network topology presentation, alarm correlation, service impact analysis and circuit provisioning).

IRP: See 3GPP TS 32.101 [1].

IRP Information Model: See 3GPP TS 32.101 [1].

IRP Information Service: See 3GPP TS 32.101 [1].

IRP Solution Set: See 3GPP TS 32.101 [1].

Managed Object (MO): an abstract entity, which may be accessed through an open interface between two or more systems, and representing a Network Resource (NR) for the purpose of management. The Managed Object (MO) is an instance of a Managed Object Class (MOC) as defined in a Management Information Model (MIM). The MIM does not define how the MO or NR is implemented; only what can be seen in the interface.

Managed Object Class (MOC): a description of all the common characteristics for a number of MOs, such as their attributes, operations, notifications and behaviour.

Managed Object Instance (MOI): an instance of a MOC, which is the same as a MO as described above.

Management Information Base (MIB): the set of existing managed objects in a management domain, together with their attributes, constitutes that management domain's MIB. The MIB may be distributed over several OS/NEs.

Management Information Model (MIM): also referred to as NRM – see the definition below. There is a slight difference between the meaning of MIM and NRM – the term MIM is generic and can be used to denote any type of management model, while NRM denotes the model of the actual managed telecommunications Network Resources (NRs).

Network Element (NE): is a discrete telecommunications entity, which can be, managed over a specific interface e.g. the RNC.

Network Manager (NM): provides a package of end-user functions with the responsibility for the management of a network, mainly as supported by the EM(s) but it may also involve direct access to the NEs. All communication with the network is based on open and well-standardised interfaces supporting management of multi-vendor and multi-technology NEs.

Network Resource (NR): is a component of a NE, which can be identified as a discrete separate entity and is in an object oriented environment for the purpose of management represented by an abstract entity called Managed Object (MO).

Network Resource Model (NRM): a model representing the actual managed telecommunications Network Resources (NRs) that a System is providing through the subject IRP. An NRM describes Managed Object Classes (MOC), their associations, attributes and operations. The NRM is also referred to as "MIM" (see above) which originates from the ITU-T TMN.

Object Management Group (OMG): see http://www.omg.org.

Operations System (OS): indicates a generic management system, independent of its location level within the management hierarchy.

3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CM	Configuration Management
CMIP	Common Management Information Protocol
CORBA	Common Object Request Broker Architecture
EM	Element Manager
FM	Fault Management
IRP	Integration Reference Point
IS	Information Service (see [1])
ITU-T	International Telecommunication Union, Telecommunication Standardisation Sector
MIB	Management Information Base
MIM	Management Information Model
MOC	Managed Object Class
MOI	Managed Object Instance
NE	Network Element
NM	Network Manager
NR	Network Resource
NRM	Network Resource Model
OMG	Object Management Group

OS	Operations System
PM	Performance Management
TM	Telecom Management
UML	Unified Modelling Language (OMG)
UMTS	Universal Mobile Telecommunications System

4 Requirements

The following general and high-level requirements apply for the present IRP:

A. IRP-related requirements in 3GPP TS 32.101: "3G Telecom Management principles and high level requirements" [1].

B. IRP-related requirements in 3GPP TS 32.102: "3G Telecom Management architecture" [2].

C. IRP-related requirements in 3GPP TS 32.600: "3G Configuration Management: Concept and High-level Requirements" [3].

In addition to the above, the following more specific requirements apply:

1. The IS defined by this IRP shall enable an NM to operate on (access) any of the NRMs defined in [4], [5], [6] and [7].

2. The IS defined by this IRP shall as far as possible be independent of any specific definitions of MOCs, attributes etc. in the NRMs referred to in item 1.

Annex A (informative):
Change history

Change history							
Date	**TSG #**	**TSG Doc.**	**CR**	**Rev**	**Subject/Comment**	**Old**	**New**
Jun 2001	S_12	SP-010283	--	--	Approved at TSG SA #12 and placed under Change Control	2.0.0	4.0.0